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on which day there was least moisture in the air, is the mean of the whole three observations.

Sir Robert Kane brought under the notice of the Academy the results of the analysis of the waters of the streams which descend from the side of the Dublin mountains, such as the Three Rock Mountain, with a view to illustrate the process of decomposition of the granite masses of those rocks, and the conversion of the felspathic elements into clays adapted for ceramic manufactures. A great number of springs and wells along the line of hills from Glencullen to Dundrum had been examined, and with similar results; but Sir Robert Kane specially detailed the quantitative analyses of two waters from Ticknock, above Rathfarnham, on the flank of the Three Rock Mountain.

The first of these specimens of water was taken from a rapidly running stream, and it was found that it contained a considerable quantity of soluble silica, combined with alkalies, there being both potash and soda present. This stream passed over a considerable tract of decomposing granite: 148,000 grains of this water left a residue on evaporation of 12·5 grains. This residue was found to contain the ordinary constituents of surface water, but in addition, alkalies and silicates amounting to—

Silica, ...	5,061	
Potash, ...	2,345	100,000.
Soda, ...	13,950	

The presence of alkaline silicates in such quantity in this water induced Sir Robert Kane to have a still more detailed analysis made of the water contained in a cavern excavated in one of the quarries made for obtaining what is called freestone, that is, the coarse powder of decomposed granite used in Dublin for scrubbing floors. This water was stagnant, and was derived from drainage through the adjoining masses of decompos-

ing granite: 88,000 grains of this water gave a solid residue of 10·50 grains; containing organic matter, 2·47 grains.

The complete analysis of this solid material showed it to contain per cent.—

Organic matter (crenic and apocrenic acids),	23·30
Carbonic acid,	7·40
Muriatic acid,	17·99
Sulphuric acid,	6·34
Silica,	3·81
Lime,	3·03
Magnesia,	0.85
Potash,	2·86
Soda,	30·48
Loss,	3·94
	100·00

The large quantity of muriatic acid in this water is of course present as chloride of sodium, derived from the vapours carried over to those mountains from the immediately adjoining sea. This 17·99 of muriatic acid takes, therefore, 15·28 of soda to form common salt. The state of combination in which the sulphuric acid may have been in is not so easily assigned; but even if we allocate to it the strongest alkalies, there will still remain a large quantity, about 12·16 per cent. of soda, which must have been combined with the silica, and with the organic acids.

The characteristic feature of those waters, which may be considered as the types of those flowing down the flanks of the granite hills south of Dublin, is the presence of considerable quantities of alkaline silicates, principally silicate of soda. This might be expected, as it verifies the mode of decomposition of granitic rocks, and the deposition of china clays, suggested by Brogniart and others, but the instances in which the waters of such localities have been accurately examined, and the actual removal therein of the alkalies and silica of the felspa-